Health Insurance database, 2009), costs of care in community and in institution (French National Assembly on AD management, report 2005). Results were reported in EUR 2009. Health-related utilities were obtained from preceding published economic evaluations in AD (Getsios et al 2001). Costs and QALYs were discounted at annual rates of 0% (base-case analysis), 3% and 5%. Deterministic and probabilistic sensitivity analyses were carried out to test the robustness of model assumptions. **RESULTS:** Over the seven-year time horizon, patients treated with ChEI monotherapy spent on average 41.6 months before institutionalization. Overall costs were €72,469 (health care system perspective) or €89,735 (societal perspective). QALYs were estimated at 2.36. Memantine as adjunct therapy to ChEI was associated with a longer time to nursing home of 8.9 months, QALYs gains of 0.19 and a cost saving of €5900 (health care system perspective) or €2200 (societal perspective), i.e. a dominant treatment scenario versus ChEI monotherapy. **CONCLUSIONS:** This economic evaluation suggest that, from both a health care system and a societal perspective, memantine as adjunct therapy to ChEI is a cost-effective strategy in the management of AD patients compared with ChEI monotherapy.

PND18

48-HOUR INFUSION OF METHYLPREDNISOLONE IS A COST-EFFECTIVE INTERVENTION FOR TRAUMATIC SPINAL CORD INJURY

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OBJECTIVES: Methylprednisolone sodium succinate (MP) is an acute therapeutic option for traumatic spinal cord injury (SCI). a pivotal multicentre randomized control trial reported modest functional improvements and increased clinical complications associated with an extended dose regimen of MP for 48 hours (48h-MP) versus a limited dose regimen of MP for 24 hours (24h-MP), resulting in clinical ambiguity between 48h-MP and 24h-MP. Concerning the health care burden imposed by this devastating form of neurotrauma, an economic assessment comparing the benefits either MP regimen imparts has never been reported. We performed a cost-effectiveness analysis (CEA) of 48h-MP compared with 24h-MP to determine their impact on direct health care costs for this patient population. **METHODS:** A decision tree model, incorporating motor improvement and complication frequencies reported by the Third National Acute Spinal Cord Injury Study and utility scores (QALYs) obtained from an Australian cohort, measured outcomes and effects at 6 and 12 months post-injury. Survival data, direct health care expenditures and complication costs associated with SCI and MP intervention were obtained from published epidemiological and survey data. CEA was performed from the health care payer's perspective, discounted at a rate of 4% annually with a lifetime horizon. Distributions of the incremental cost-effectiveness ratio between the interventions were determined by Monte Carlo simulation. The model was validated with sensitivity analyses by varying costs and outcome comparators. **RESULTS:** As a result, 48h-MP dominates 24h-MP, providing higher QALYs at lower costs. The lower costs associated with 48h-MP intervention was $35,703 per patient lifecycle. Earlier motor improvement maintained at 1-year post-injury was a key variable favouring 48h-MP intervention, despite complications associated with this dosing regimen. **CONCLUSIONS:** To conclude, 48h-MP is the cost-effective intervention for SCI in comparison to 24h-MP, wherein the former results in modestly improved motor function, an effect which is maintained up to at least 1-year post-injury.

PND19

A LONG-TERM COST-EFFECTIVENESS MARKOV MODEL COMPARING DISEASE MODIFYING TREATMENTS IN PATIENTS WITH RELAPSING REMITTING MULTIPLE SCLEROSIS IN GERMANY

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OBJECTIVES: To conduct a German economic evaluation of natalizumab compared to other disease modifying drugs (DMD) in relapsing-remitting Multiple Sclerosis (MS) from a societal perspective. **METHODS:** A Markov model was designed to compare costs and outcomes of Natalizumab (Nb), other DMD (interferon-beta, glatiramer acetate) and best supportive care (BSC). The expanded disability status scale (EDSS) and the line of treatment were used to define the distinctive Markov States. Transition probabilities for progression, treatment switches and withdrawals were derived from clinical studies and literature. German real-life treatment data of MS-patients under DMD were collected retrospectively (N = 554) and used to validate assumptions and conduct sensitivity analyses. Cost data and quality of life estimates were taken from a European burden of MS study. a time horizon of 30 years and annual discount rates of 3% for costs and outcomes were chosen. **RESULTS:** Treatment with Nb resulted in 8.13 avoided relapses over 30 years, and in 2.36 avoided relapses under other DMD. After 30 years, the proportion of surviving patients at a low state of disease (incl. EDSS 4) was 59% for the Nb group, 31% for the other DMD and 8% for patients in the BSC group. The average MS related costs over 30 years were estimated at €847,160 for Nb, €816,139 for other DMD, and €627,701 for BSC. Cost per quality adjusted life-year (QALY) was €60,938 for Nb, €64,481 for other DMD and €53,911 for BSC. The incremental cost-effectiveness of Nb compared to other DMD was €24,919 per QALY. **CONCLUSIONS:** MS is a resource intense disease due to its chronic course and its severe impact on patients' daily life. Long term analysis suggests that even treatment without DMD is expensive and leads to considerable inferior clinical outcomes. Treatment with DMD improves the situation of patients, with Natalizumab showing the highest efficacy and best cost-effectiveness ratio.

PND20

IS ROPINIROLE-PROLONGED RELEASE A COST-SAVING TREATMENT OPTION IN PARKINSON'S DISEASE?

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OBJECTIVES: Parkinson's Disease (PD) is both a chronic and progressive neurodegenerative disorder. a 24-hour prolonged release tablet (PR) of the dopamine agonist ropinirole was introduced next to three daily doses of ropinirole immediate release (IR). a randomized controlled trial (PREPARED) was conducted, comparing ropinirole-IR with ropinirole-PR. Ropinirole-PR significantly improved the off-time and this analysis assesses the costs-effectiveness of the ropinirole-PR in PD patients who are not adequately controlled on L-dopa compated to ropinirole-IR. **METHODS:** A Markov-health-state-transition model was used with health states combining off-time ≤25% and >25% per day, Hoehn & Yahr stages 2–5 and problematic dyskinesias. Time horizons are 5 years and lifelong. Costs and effects were discounted by 4% and 1,5% respectively. Healthcare perspective was taken, covering direct costs related to medication, consults, nursing and patient care including informal care, based on an ongoing Dutch observational study in PD (IMPACT study). Clinical outcomes from the PREPARED-trial are extrapolated based on literature assumptions. Results are presented as incremental costs and QALY's gained. Both univariate and probabilistic sensitivity analyses (PSA) were performed. **RESULTS:** Ropinirole-PR was associated with lower L-dopa use, less off-time and less problematic dyskinesias. This resulted in incremental QALY gains of 0.125 and 0.336 over respectively 5 years and lifetime. The health care costs per H&Y-stage increased with disease severity and amounted €916, €1,492, €11,295 and €11.295 for stage 2 to 5 over 6 months. Treatment with ropinirole-PR was more costly than ropinirole-IR with a difference of €7.266 over 5 years and €17.773 over lifetime. Treatment with ropinirole-PR however reduced medical costs by €8,059 over 5 years and €69,532 over lifetime compared with ropinirol-IR, mainly due to reduced dyskinesia occurrence. Sensitivity analysis confirmed the robustness of the model. **CONCLUSIONS:** Patient-functioning and quality of life were improved with ropinirole-PR realizing cost-savings to the health care budget as compared to treatment with ropinirole-IR.

PND21

COST-EFFECTIVENESS OF TRANSDERMAL PATCH (ROTIGOTINE) IN PATIENTS WITH PARKINSON DISEASE IN MEXICO

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BACKGROUND: Parkinson's Disease (PD) is a central nervous system disorder caused by progressive deterioration of brain areas that produce dopamine. Oral dopaminergic therapies control the symptoms of the disease, but these require three or more times daily doses, so it is associated with poor compliance or adherence, which affects the overall efficacy and costs in health. **OBJECTIVES:** To analyze the cost-effectiveness of rotigotine versus pramipexole in patients with PD in Mexico. **METHODS:** We conducted an economic evaluation. The alternatives to compare were rotigotine 4, 6, 8 and 12 mg administered once daily versus pramipexole 3 mg/d and another scenario versus pramipexole 4.5 mg/d. The perspective is the Mexican Social Security Institute. The model included the cost of drug acquisition and management of adverse events (AE) for a 22 weeks period. The measure of efficacy was compliance or adherence to treatment, as a direct comparison study of rotigotine versus pramipexole demonstrated non-inferiority between the two alternatives. **RESULTS:** The compliance rate for rotigotine was 81% vs. 61% pramipexole. The costs were US$748, US$920, US$1113 and US$1701 for rotigotine 4, 6, 8 and 12 mg/d respectively, compared with US$670 and US$967 for pramipexole 3 and 4.5 mg/d. The cost per successfully treated patient was lower for rotigotine 4, 6 and 8 mg/d (US$923, US$1 136 and US$1374, respectively) than with pramipexole 4.5 mg/d (US$1585). Rotigotine 4, 6, 8 and 12 mg/d were found to be a highly cost-effective strategy compared with pramipexole 3 and 4.5 mg/d, according to WHO criteria. **CONCLUSIONS:** The results of this analysis suggest that the use of rotigotine in patients with PD, represents a highly cost-effective strategy or cost saving for the public health institutions in Mexico. Rotigotine is an innovative alternative for easy administration (transdermal).

PND22

COST-EFFECTIVENESS ANALYSIS COMPARING BRIDION® (SUGAMMADEX) WITH NEOSTIGMIN AND SPONTANEOUS RECOVERY IN THE REVERSAL OF NEUROMUSCULAR BLOCKADE INDUCED BY ROCURONIUM/VECURONIUM

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OBJECTIVES: This study aimed to compare the cost-effectiveness (CE) of Bridion® (sugammadex) with neostigmine and spontaneous recovery (SR) approach in the reversal of neuromuscular blockade (NMB) induced by rocuronium/vecuronium, during anesthesia. **METHODS:** CE analysis (CEA) was performed by solving back the decision tree that included pathways starting with residual NMB and followed by hypoxia and pulmonary complications defined as "aspiration, atelectasis and/or pneumonia" in patients, in whom NMB was induced by rocuronium/vecuronium. Bridion was compared with neostigmine and SR approach. Primary analysis parameters that